

SUCCESS STORY

▶▶▶ CREATING A WEBSITE & WEB MAPPING SERVICE FOR CITIZEN SCIENCE

PROBLEM

Beaver Creek Reserve and the Wisconsin Department of Natural Resources (DNR) turned to Applied Data Consultants, Inc.'s (ADC's) web development team in 2007 to improve their biological mapping web application. Their web site, a biodiversity survey program that allows citizens, school groups, and professionals to enter their wildlife observations into a statewide database in a map-centric interface, was in need of modernization. Functional, performance as well as aesthetic upgrades were deemed necessary to meet the usability and speed expectations of today's web map user.

SOLUTION

The ADC-driven upgrade employs a set of open source geospatial technologies to leverage the power of GIS spatial and analytical reasoning in the application workflow. PostGIS, a spatial adapter for the PostgreSQL relational database, serves as the data storage backend for the geometric and tabular observations entered by the NatureMappers. Map data is prepared for web presentation using the standards-compliant GeoServer image server engine. The web site itself utilizes the OpenLayers JavaScript library for displaying a combination of GoogleMaps base layers and NatureMapping specific geographic data. A set of simple, easy to use navigation controls, along with a collection of feature creation and editing tools, allow the NatureMapper to record the wildlife observations in a streamlined, efficient manner. The Web Feature Service - Transactional 2.0 specification support of GeoServer is employed to allow adding, deleting and updating of the geographic features across the internet to a centralized database.

RESULTS

By collecting and recording wildlife observations, NatureMappers become more aware of their surroundings, deepen their sense of place, and strengthen their connection to the natural world. The observations are then used for natural resource management, scientific studies and environmental education, and have been included in the Wisconsin Wildlife Action Plan.

“Switching to ADC was a logical choice due to the fact that ADC is a local business with employees who are also passionate about Wisconsin wildlife and able to provide Wisconsin NatureMapping with better tech support and development advice.”



Sarah Braun
CSC Director
Beaver Creek Reserve

